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Marco Ferrato

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EXAMINER

PHAM, TIMOTHY X

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/580,555	Applicant(s) FERRATO ET AL.	
	Examiner TIMOTHY PHAM	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed February 7, 2011 have been fully considered but they are not persuasive.

On pages 8 and 10 of the Applicant's Response, applicant argues that "Oates does not disclose each and every element of independent claim 22, Oates does not anticipate claim 22 *under 35 U.S.C. § 102(e)*.*Oates' network simulators 207 and 211 do not simulate the same network. For example, Oates discloses that "[t]he present invention relates to [an] apparatus for adapting the distribution of network events between two or more networks."* ... *Oates further discloses that "[i]n one embodiment, customers subscribe to two different networks, each of which provides a quantifiable level of service"*, with the corresponding teaching indicating the arguments and the arts references below, the Examiner respectfully disagrees.

Examiner emphasized of the rejection position that Oates discloses the engine included two different simulators to simulate different traffic profiles based on network parameters list setting 203 (paragraph [0029]). The second traffic profile is distinct from the first traffic profile (paragraph [0031]). Each simulator in engine 200 (Figure 2) distributes traffic event for each network and network simulators 211 and 207 are adapting the distribution of network event between two networks. However, reading in claimed limitation of claim 1, the limitation recites "first and second configuration of said mobile telephone network being statistically independent of each other" denotes that there are two network configurations simulated (see Specification page 30 lines 20-24). There is no indication showing that the first simulation and second simulation configure to simulate in the same network. Claim 1 recites "simulating a first

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configuration of said mobile telephone network; simulating a second configuration of said mobile telephone network”, but is silent to recites both configurations are simulated in the same network. Therefore, during patent examination, the claims must be given their broadly reasonable interpretation. See MPEP 2111. The term “simulating a first configuration of said mobile telephone network; simulating a second configuration of said mobile telephone network, said first and second configurations of said mobile telephone network being statistically independent of each other” is broadly claimed, therefore, it is broadly interpreted. Thus, the Examiner invites applicant to amend the claims to contain specific definition from specification to distinguish the intended invention with the cited prior arts.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 22-25, 32-38, and 41-42 are rejected under 35 U.S.C. 102(e) as being anticipated by Oates (US 2004/0111502; Cited in PTO-892 Part of Paper No. 20101022).**

Regarding claim 22, Oates discloses a method for evaluating the performance of a mobile telephone network, comprising the steps of:

simulating a first configuration of said mobile telephone network (Fig. 2 reference 207; paragraph [0030]-[0031], [0034], [0038]; [0077]; e.g., when the first network simulator 207 operates on its modified traffic profile 201_{3,207});

simulating a second configuration of said mobile telephone network (Fig. 2, reference 211; paragraph [0031], e.g., the second network simulator 211 receives input from both the second traffic profile 201_{2,211}),

said first and second configurations of said mobile telephone network being statistically independent of each other (paragraphs [0034], [0077], e.g., the first network simulator 201_{3,207} is likely to be different to that of the second network simulator 201_{3,211}),

each of said simulation steps comprising the steps of: specifying a total number of users to be simulated (Fig. 2, reference 201; Fig. 3 reference S3.1; paragraphs [0029]; e.g., a first traffic profile 201_{1,207}),

determining a sequence of activation of user blocks included in said total number of users to be simulated (paragraphs [0029], [0034], e.g., Each traffic profile comprises one or more network events, such as "set up call between node 1 and node 2 at 09:05"; it is noted that set up call at particular time characterizes as a sequence of activation of user),

activating said user blocks in succession until said total number of users to be simulated is reached, each user block indicating a traffic distribution (paragraphs [0063], [0071], e.g., If the original population size P has been restored the process proceeds to step S 6.13 whereupon it is determined whether the maximum number of generations G has been reached), and

processing at least one radio resource management event relating to the traffic distribution associated with each currently activated user block (paragraphs [0026], [0029],

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[0039], e.g., The network parameters 203 include network routing and bandwidth variables and are described in greater detail below. In the following description a traffic profile is identified as 201_{i,j} where i indicates an instance of a traffic profiles, and j indicates a network simulator that the i_{th} instance applies to); and

processing jointly statistical results generated using each of said simulation configurations (paragraphs [0030], [0032], [0033], [0066]; claim 1; e.g., At step S 5.4, this record is sent to estimator 213, which combines these times in order to generate a corresponding QoS. QoS is a response value that quantifies the efficiency of the network to respond to the network events).

Regarding claim 23, Oates discloses the method of evaluating according to claim 22, comprising the step of:

repeating said steps of simulating said mobile telephone network until a predetermined accuracy threshold is reached for each simulated network value (paragraphs [0036], [0063], [0067], e.g., the optimisation process is repeated for a predetermined number of evaluations, and whichever parameter set outputs the highest QoS (thus lowest circuit restoration time) is assigned to optimised network parameters).

Regarding claim 24, Oates discloses the method of evaluating according to claim 22, wherein each activated user block comprises at least one user (paragraph [0029], e.g., Each traffic profile comprises one or more network events, such as "set up call between node 1 and node 2 at 09:05"; it is noted that each setup call is representing as one user).

Regarding claim 25, Oates discloses the method of evaluating according to claim 22, wherein said step of processing at least one radio resource management event

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comprises the step of: executing at least one radio resource management algorithm (paragraphs [0040], [0091]).

Regarding claim 32, Oates discloses the method of evaluating according to claim 23, wherein said step of repeating said steps of simulating said mobile telephone network comprises: a step of collecting and processing statistical results (paragraphs [0030], [0032], [0066]-[0067]); and

a step of checking the accuracy of the resulting statistical data (paragraphs [0030], [0032], [0066]-[0067]; e.g., it is noted that the optimisation procedure is performed by all statistical resulting data).

Regarding claim 33, Oates discloses the method of evaluating according to claim 32, wherein said step of collecting and processing statistical results comprises the steps of: collecting statistical results relating to simulated network values (paragraphs [0063], [0066], [0071]; e.g., distribution of network events); and obtaining at least one accuracy indicator for each of said simulated network values (Claim 1, e.g., indicative of the success of the simulated event).

Regarding claim 34, Oates discloses the method of evaluating according to claim 33, wherein said at least one accuracy indicator comprises at least one parameter selected from the confidence interval of a statistical value and the stability indicator of a statistical value (paragraphs [0066]-[0067]; Claim 1, e.g., indicative of the success of the simulated event).

Regarding claim 35, Oates discloses the method of evaluating according to claim 32, wherein said step of checking the accuracy of the resulting statistical data comprises the steps of: comparing, for each simulated network value, said at least one accuracy indicator with the corresponding predetermined accuracy threshold (paragraphs [0006], [0078], [0086]; claim 1;

e.g., comparing the first and second quantified performance values with a predetermined performance value and identifying which of the first or second quantified performance values most closely resembles the predetermined performance value); and

terminating the simulation when said at least one accuracy indicator reaches said predetermined accuracy threshold (paragraphs [0071], [0077]).

Regarding claim 36, Oates discloses simulation equipment for simulating at least a first and a second configuration of a mobile telephone network (Fig. 2 reference 207), said first and second configurations of said mobile telephone network being statistically independent of each other (paragraphs [0034], [0077], e.g., the first network simulator 201_{3,207} is likely to be different to that of the second network simulator 201_{3,211}), and each comprising a total number of users to be simulated (Fig. 2, reference 201; Fig. 3 reference S3.1; paragraphs [0029]; e.g., a first traffic profile 201_{1,207}), comprising:

at least one object representing a network controller belonging to said mobile telephone network (Fig. 2 reference 200); said at least one object comprising:

first modules for determining a sequence of activation of user blocks included in said total number of users to be simulated (Fig. 2 reference 207; paragraph [0030]-[0031], [0034], [0038]; [0077]; e.g., when the first network simulator 207 operates on its modified traffic profile 201_{3,207});

second modules for activating said user blocks in succession until said total number of users to be simulated is reached, each user block indicating a traffic distribution (Fig. 2, reference 211; paragraph [0031], e.g., the second network simulator 211 receives input from both the second traffic profile 201_{2,211}); and

third modules for processing at least one radio resource management event relating to the traffic distribution associated with each activated user block (Fig. 2, reference 209; paragraph [0063]; e.g., the optimiser 209 monitors the performance of the network simulator 207 against a predetermined performance measure; therefore, optimiser 209 characterizes equivalent as a third module for processing a radio resource management event),

wherein the at least one object is configured to process jointly statistical results generated using each of said simulation configurations (paragraphs [0030], [0032], [0033], [0066]; claim 1; e.g., At step S 5.4, this record is sent to estimator 213, which combines these times in order to generate a corresponding QoS. QoS is a response value that quantifies the efficiency of the network to respond to the network events).

Regarding claim 37, Oates discloses the simulation equipment, according to claim 36, wherein said at least one object comprises data structures for supporting the processing of said at least one radio resource management event, said data structures comprising: a list of activatable users; a list of active users; and a group of lists of users out of service; and a map of the system resources (paragraph [0080]; e.g., responding to user-generated events in real time, or processing pre-recorded event files).

Regarding claim 38, Oates discloses the simulation equipment, according to claim 37, wherein said map of the system resources comprises a plurality of structures, each representing a transceiver device belonging to said mobile telephone network (paragraphs [0036], [0063], [0067], e.g., the optimisation process is repeated for a predetermined number of evaluations, and whichever parameter set outputs the highest QoS (thus lowest circuit restoration time) is assigned to optimised network parameters), each structure comprising a reference to the

corresponding transceiver device and a list of cell context objects, one for each cell controlled by said transceiver device (paragraph [0029], e.g., Each traffic profile comprises one or more network events, such as "set up call between node 1 and node 2 at 09:05"; it is noted that each setup call is representing as one user).

Regarding claim 41, Oates discloses the simulation equipment, according to claim 36, comprising a simulation engine comprising an event scheduler module for specifying the sequence of operations performed by said simulation equipment (Fig. 2 reference 200; paragraphs [0081], [0085]; e.g., the engine 200 is to be used purely for determining optimum network parameters for a predetermined traffic profile).

Claim 42 is drawn to a non-transitory computer readable medium encoded with a program comprising code means for generating steps of claims 22-35. Therefore, the same rationale applied to claims 22-35 applies. In addition, Oates inherently discloses a computer program product, i.e., given that Oates discloses a process, the process would be implemented by a processor that requires a computer program product, e.g., a RAM, to function.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 26-31 and 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oates in view of Leila Zurba Ribeiro (hereinafter “Leila”; Cited in PTO-892 Part of Paper No. 20090617).

Regarding claim 26, Oates discloses the method of evaluating according to claim 25, fails to specifically disclose wherein said radio resource management algorithm comprises an admission control algorithm.

However, Leila discloses wherein said radio resource management algorithm comprises an admission control algorithm (page 43, section 4.3.1, e.g., admission control).

Therefore, taking the teachings of Oates in combination of Leila as a whole, it would have been obvious to one having ordinary skill in the art at the time of the invention by applicant to have radio resource management algorithm comprises an admission control algorithm for advantages of preventing unpredictability of individual flow’s behavior that occur during simulations on a wide variety of network topologies and driven with various source models.

Regarding claims 27 and 39, Oates in combination with Leila discloses the method and the simulation equipment of evaluating according to claims 26 and 38, comprising the steps of:

detecting that at least one admission control threshold has been exceeded for at least one of the users belonging to the currently activated user block(page 171, section 7.2.2); and

taking said user out of service (page 171, section 7.2.2, e.g., it then accepts or rejects the request service (RABs) depending on specified acceptance thresholds).

Therefore, taking the teachings of Oates in combination of Leila as a whole, it would have been obvious to one having ordinary skill in the art at the time of the invention by applicant

to detect that at least one admission control threshold has been exceeded for at least one of the users belonging to the currently activated user block and taking user out of service for advantages of preventing unpredictability of individual flow's behavior that occur during simulations on a wide variety of network topologies and driven with various source models.

Regarding claims 28 and 40, Oates discloses the method and the simulation equipment of evaluating according to claims 25 and 38, fails to specifically disclose wherein said radio resource management algorithm comprises a congestion control algorithm.

However, Leila discloses radio resource management algorithm comprises a congestion control algorithm (page 171, section 7.2.2).

Therefore, taking the teachings of Oates in combination of Leila as a whole, it would have been obvious to one having ordinary skill in the art at the time of the invention by applicant to have radio resource management algorithm comprises a congestion control algorithm for advantages of preventing unpredictability of individual flow's behavior that occur during simulations on a wide variety of network topologies and driven with various source models.

Regarding claim 29, Oates in combination with Leila discloses the method of evaluating according to claim 28, comprising the steps of:

detecting that at least one congestion control threshold has been exceeded for at least one of the users belonging to the currently activated user block (Leila: page 171, section 7.2.2); and

taking said user out of service (Leila: page 171, section 7.2.2).

Therefore, taking the teachings of Oates in combination of Leila as a whole, it would have been obvious to one having ordinary skill in the art at the time of the invention by applicant to detect that at least one admission control threshold has been exceeded for at least one of the users belonging to the currently activated user block and taking user out of service for advantages of preventing unpredictability of individual flow's behavior that occur during simulations on a wide variety of network topologies and driven with various source models.

Regarding claim 30, Oates discloses the method of evaluating according to claim 25, fails to specifically disclose wherein said radio resource management algorithm comprises an outage control algorithm.

However, Leila discloses radio resource management algorithm comprises an outage control algorithm (page 51, section 5.1.1; page 53, e.g., while in static simulation outage is defined as the event of the C/I ration falling bellow a certain threshold).

Therefore, taking the teachings of Oates in combination of Leila as a whole, it would have been obvious to one having ordinary skill in the art at the time of the invention by applicant to have radio resource management algorithm comprises an outage control algorithm for advantages of preventing unpredictability of individual flow's behavior that occur during simulations on a wide variety of network topologies and driven with various source models.

Regarding claim 31, Oates in combination with Leila discloses the method of evaluating according to claim 30, comprising the steps of:

detecting that at least one congestion control threshold has been exceeded for at least one of the users belonging to the currently activated user block (Leila: page 171, section 7.2.2); and

taking said user out of service (Leila: page 171, section 7.2.2).

Therefore, taking the teachings of Oates in combination of Leila as a whole, it would have been obvious to one having ordinary skill in the art at the time of the invention by applicant to detect that at least one admission control threshold has been exceeded for at least one of the users belonging to the currently activated user block and taking user out of service for advantages of preventing unpredictability of individual flow's behavior that occur during simulations on a wide variety of network topologies and driven with various source models.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **TIMOTHY PHAM** whose telephone number is (571)270-7115. The examiner can normally be reached on Monday-Friday; 8:00AM-5:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne D. Bost can be reached on 571-272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Timothy Pham/
Examiner, Art Unit 2617

/PIERRE-LOUIS DESIR/
Primary Examiner, Art Unit 2617